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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
STEELE, AMBER D	

ART UNIT	PAPER NUMBER
1639	

MAIL DATE	DELIVERY MODE
05/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/767,476	STUELPNAGEL ET AL.	
	Examiner	Art Unit	
	Amber D. Steele	1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *29-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/9/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

1. Claims 1-28 were canceled and new claims 29-50 were added in the preliminary amendment received on January 28, 2004.

In the amendment to the claims received March 9, 2007, claims 29 and 41 were amended and new claims 51-58 were added.

Claims 29-58 are currently pending and under consideration.

Priority

2. The present application claims status as a CON of 09/606,369 filed June 28, 2000 which is a CIP of 09/473,904 filed December 28, 1999 (issued as U.S. Patent 6,858,394 on February 22, 2005) which is a CIP of 09/256,943 filed February 24, 1999 (issued as U.S. patent 6,429,027 on August 6,2002) which claims benefit of 60/113,968 filed December 28, 1998.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on March 9, 2007 is being considered by the examiner.

Invention as Claimed

4. An array of arrays comprising (a) a first substrate with a surface comprising a plurality of assay wells and (b) a second substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said array locations are configured as projections to fit within said assay wells and variations thereof.

Withdrawn Objection

5. The objection to the disclosure regarding the lack of description of Figure 1F is withdrawn in view of applicants' amendment to the specification received on March 9, 2007.

Withdrawn Rejection

6. The rejection of claims 29, 35, and 40 on the ground of nonstatutory obviousness-type double patenting (provisional) as being unpatentable over claims 38, 40, 41, 42, 43, 44 of copending Application No. 09/189,543 is withdrawn in view of the abandonment of the application on March 19, 2007.

Maintained Rejections

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Please note: the rejections have been altered to reflect the claim amendments received on March 9, 2007.

Claim Rejections - 35 USC § 102

8. Claims 29-32, 35-39, 41-42, 45-49, 51-52, 54, 55-56, and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Rava et al. U.S. Patent 5,545,531 issued August 13, 1996.

For present claims 29, 41, 51-52, and 55-56, Rava et al. teach "array or arrays" including individual DNA or probe (e.g. bioactive) chips (i.e. projections, molded) in each well of a microplate (i.e. "dipped" in) wherein the "first substrate" is a mictotiter plate and the "second substrate" is a wafer or discretely placed probes and each probe is different (please refer to abstract; Figures 3, 4, 5, 6, 7; columns 1-12; claims 1-4).

For present claim 30, Rava et al. teach hybridization of probes to targets within the microtiter plate and/or chips (please refer to columns 3, 7).

For present claim 31, Rava et al. teach microtiter plates (please refer to Figures 3, 4, 5, 6, 7; columns 2, 4, 8, 9-10).

For present claims 32 and 42, Rava et al. teach 96-well microtiter plates (please refer to Figures 3, 4; columns 2, 4, 8, 9-10).

For present claims 35 and 45, Rava et al. teach the biological reagents or probes are DNA, RNA, nucleic acid, agonists and antagonists for cell membrane receptors, toxins, bvenoms, viral epitopes, hormones, peptides, steroids, receptors, enzymes, substrates, cofactors, drugs, lectins, sugars, oligos, oligosaccharides, proteins, or antibodies (please refer to columns 2-3, 7, 11, 12; claims 1-4).

For present claims 36-38 and 46-48, Rava et al. teach 10, 100, 1000, 2500, 10,000 (also in 1 cm^2), 48,400, 50,000, 100,000, 1,000,000, 4,800,000, or 10,000,000 probes per well of a 96-well microtiter plate wherein the diameter of an individual well of a 96-well microtiter plate is less than 1 square centimeter or approximately 0.25 mm^2 (e.g. about 10,000,000 or less; please refer to columns 2, 9-10; Figure 4).

For present claims 39 and 49, Rava et al. teach that the biological reagents can be directly attached to the wafer or substrate wherein the biological reagent or substrate provides an adequate surface for attachment (please refer to columns 9-10).

For present claims 54 and 58, Rava et al. teach photolithographic techniques (please refer to column 9, line 17)

Therefore, the teachings of Rava et al. anticipate the presently claimed invention.

Arguments and Response

9. Applicants' arguments directed to the rejection under 35 USC 102 (b) as being anticipated by Rava et al. U.S. Patent 5,545,531 for claims 29-32, 35-39, 41-42, 45-49, 51-52, 54, 55-56, and 58 were considered but are not persuasive for the following reasons.

Applicants contend that Rava et al. do not teach a substrate that includes several arrays that are each configured as projections. In addition, applicants contend that Rava et al. teach a wafer attached to a plurality of channels, chips attached to wells (e.g. each well has a single array), and chip plate with material resistant to flow of a liquid sample.

Applicants' arguments are not convincing since the teachings of Rava et al. anticipate the array of arrays of the instant claims. Rava et al. teach DNA chips comprising a plurality of array locations (e.g. columns or rows) with a plurality of discrete sites that comprise bioactive agents (e.g. DNA) in wells wherein the chip or wafer is a "projection" (e.g. protruding out from the surface of the well). In addition, the presently claimed invention does not require more than one array in each well, but only a plurality of array locations in each well. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., multiple arrays in each well) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

10. Claims 29-32, 35-42, 45-52, and 55-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Holmes U.S. Patent 5,549,974 issued August 27, 1996.

For present claims 29, 41, 51-52, and 55-56, Holmes teaches chemical (e.g. bioactive) arrays with a "first substrate" which can be wells or a microtiter plate and a "second substrate" which can be beads, resins, pins, etc. (e.g. projections, "dipped" in wells, molded) in the wells of a microtiter plate with different chemicals on each bead, resin, pin, etc. (please refer to columns 8-9, 11-30).

For present claim 30, Holmes teaches binding and hybridization to chemicals in the array or wells (please refer to columns 22, 29-30).

For present claim 31, Holmes teaches wells and microtiter plates (please refer to column 9, 24, 27).

For present claims 32 and 42, Holmes teaches 96-well microtiter plates (please refer to column 27).

For present claims 35 and 45, Holmes teaches "peptide structural analogs" or thiazolidinones, metathiazanone, or peptidomimetics (please refer to abstract; columns 2-4, 8).

For present claims 36-38 and 46-48, Holmes teaches beads from 1nm to 100 μm with capacities for 100 to 500 pmol of molecules per bead with about 100,000 beads per pool (e.g. about 10,000,000 or less agents per square centimeter; please refer to columns 9, 11, 30).

For present claims 39 and 49, Holmes teaches that the chemicals are coupled to the array locations either with linkers, directly, or wherein the bead or pin is modified to accept the chemicals (please refer to columns 11-12, 25, 27).

For present claims 40 and 50, Holmes teaches beads or spheres from 1nm to 100 μm (please refer to columns 9, 11, 24-25, 30).

Therefore, the teachings of Holmes anticipate the presently claimed invention.

Arguments and Response

11. Applicants' arguments directed to the rejection under 35 USC 102 (b) as being anticipated by Holmes U.S. Patent 5,549,974 for claims 29-32, 35-42, 45-52, and 55-56 were considered but are not persuasive for the following reasons.

Applicants contend that Holmes et al. do not teach a "substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said array locations are configured as projections" to fit within a plurality of assay wells. In addition, applicants contend that Holmes et al. teaches solid supports having projections, but only teaches projections with a single type of molecule attached.

Applicants' arguments are not convincing since the teachings of Holmes et al. anticipate the array of arrays of the instant claims. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. a single projection with multiple molecules attached) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The present claims reads that the second substrate (as a whole) comprises a plurality of array locations (e.g. all pins on the substrate) comprising a plurality of discrete sites (e.g. each pin) wherein said sites comprise different bioactive agents (e.g. each pin has a different bioactive agent from the other pins).

12. Claims 29-52, 54-56, and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by Felder et al. U.S. Patent 6,458,533 filed December 22, 1998 (effective filing date of December 19, 1997).

For present claims 29, 41, 51-52, and 55-56, Felder et al. teach apparatuses or biological arrays comprising a surface of test regions which can be wells of a microtiter plate which are further subdivided into smaller subregions (e.g. wells within wells) with the biological reagents attached which can be different and wherein beads can be within the wells (e.g. projections, "dipped" in, molded; please refer to abstract; Figures 2, 4, 5a, 5b, 5c, 9, 10, 12, 15, 16, 17, 18, 19, 20a, 20b, 22; columns 1-33; Examples 1-20).

For present claim 30, Felder et al. teach hybridization or binding in the wells or subregions (please refer to columns 3-4, 9-32; Examples 1, 2, 4, 5, 6, 12, 13, 14, , 15, 16, 17, 18, 19, 20).

For present claim 31, Felder et al. teach microtiter plates (please refer to columns 2-3, 5-6, 10, 13; Example 1).

For present claims 32-34 and 42-44, Felder et al. teach 96, 384, and 1536 well microtiter plates (please refer to columns 2, 5-6, 10, 13; Example 1).

For present claims 35 and 45, Felder et al. teach that the biological reagents or probes are RNA, oligos, DNA, PNA, enzymes, polymers, agonists or antagonists for cell membranes, toxins, venoms, viral epitopes, hormones, steroids, peptides, receptors, lectins, sugars, nucleic acids, oligosaccharides, proteins, antibodies (please refer to column 4).

For present claims 36-38 and 46-38, Felder et al. teach regions of about 1 to 700 mm^2; subdividing a 1536-well plate (e.g. each well less than 1 cm^2; approximately 1.7 mm diameter)

into about 4 to 900 wells wherein each well has 9-36 reagents or 32,400 reagents and 96 well plates would accommodate more samples due to the larger size (e.g. each well less than 1 cm^2); and 345,000 test reagents (e.g. about 10,000,000; please refer to columns 2, 6-7).

For present claims 39 and 49, Felder et al. teach direct attachment of probes to surfaces (please refer to columns 4, 7-10).

For present claims 40 and 50, Felder et al. teach beads (please refer to column 5).

For present claims 54 and 58, Felder et al. teach photolithographic techniques (please refer to column 13, line 40).

Therefor, the presently claimed invention is anticipated by the teachings of Felder et al.

Arguments and Response

13. Applicants' arguments directed to the rejection under 35 USC 102 (e) as being anticipated by Felder et al. U.S. Patent 6,458,533 for claims 29-52, 54-56, and 58 were considered but are not persuasive for the following reasons.

Applicants contend that Felder et al. do not teach a substrate with several arrays that are each configured as projections that fit within the wells.

Applicants' arguments are not convincing since the teachings of Felder et al. anticipate the array of array of the instant claims. Felder et al. teach an array of arrays wherein the nucleotides are attached to beads (e.g. projections) within the well of wells (e.g. array of arrays; please refer to Figures 4, 5a, 5b, 5c, 10, 18, 19, 20a, 20b, 22; column 5, lines 1-23; column 8, lines 48-67).

14. Claims 29-32, 35-42, 45-52, 54-56, and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al. U.S. Patent 5,922,617 filed November 12, 1997.

For present claims 29, 41, 51-52, and 55-56, Wang et al. teach a solid surface (e.g. first substrate) with circular grooves which are U-shaped, V-shaped, flat-bottomed, or have corrugated walls and the grooves can be separated with walls (e.g. wells) that contain microbeads (e.g. projections, molded, "dipped" in, second substrate) in the grooves (please refer to Figures 2C, 2D, 3A, 3B, 4, 5, 6; columns 2-9, 13-15). In addition, Wang et al. teach 96-well plates (please refer to column 5, lines 46-59). Furthermore, Wang et al. teach organic molecules (e.g. bioactives) in the arrays (please refer to columns 3-5).

For present claim 30, Wang et al. teach hybridization (please refer to columns 4 and 9).

For present claim 31, Wang et al. teach microtiter plates (please refer to column 5).

For present claims 32 and 42, Wang et al. teach 96-well plates (please refer to column 5).

For present claims 35 and 45, Wang et al. teach that the organic molecules can be nucleic acids, RNA, receptor, ligand, antibodies, biotin, enzymes, DNA, proteins (please refer to columns 3-5).

For present claims 36-38 and 46-48, Wang et al. teach beads of 1μ-100μ wherein more than 10^6 beads can be arrayed on less than 2x2 cm solid surface and 20-10^6 molecules per 1-200μ of solid surface (e.g. about 10,000,000 or 100,000 or 10,000 bioactives per square centimeter; please refer to columns 6-8).

For present claims 39 and 49, Wang et al. teach directly binding the component to the solid surface (please refer to column 3).

For present claims 40 and 50, Wang et al. teach microbeads (please refer to columns 5-8).

For present claims 54 and 58, Wang et al. teach photolithographic techniques (please refer to column 5, line 33; column 9, line 15).

Therefore the teachings of Wang et al. anticipate the presently claimed invention.

Arguments and Response

15. Applicants' arguments directed to the rejection under 35 USC 102 (e) as being anticipated by Wang et al. U.S. Patent 5,922,617 for claims 29-32, 35-42, 45-52, 54-56, and 58 were considered but are not persuasive for the following reasons.

Applicants contend that Wang et al. do not teach several arrays configured as projections that fit within wells. In addition, applicants contend that Wang et al. forms a single array because there is no description of individual beads including a plurality of discrete sites with different bioactive agents.

Applicants' arguments are not convincing since the teachings of Wang et al. anticipate the array of arrays of the instant claims. Wang et al. teach beads within grooves (please refer to Figures 2C, 2D, 5). In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. a single projection with multiple molecules attached) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The present claims reads that the second substrate (as a whole) comprises a plurality of array locations (e.g. all beads within the first substrate) comprising a plurality of discrete sites (e.g. each bead) wherein said sites comprise different bioactive agents (e.g. each bead has a different bioactive agent from the other beads).

New Rejections Necessitated by Amendment

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. Claim 29-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Felder et al. U.S. Patent 6,458,533 filed December 22, 1998 (effective filing date of December 19, 1997) and Walt et al. U.S. Patent 6,327,410 effective filing date March 14, 1997.

For present claims 29, 41, 51-52, and 55-56, Felder et al. teach apparatuses or biological arrays comprising a surface of test regions which can be wells of a microtiter plate which are further subdivided into smaller subregions (e.g. wells within wells) with the biological reagents attached which can be different and wherein beads can be within the wells (e.g. projections, "dipped" in, molded; please refer to abstract; Figures 2, 4, 5a, 5b, 5c, 9, 10, 12, 15, 16, 17, 18, 19, 20a, 20b, 22; columns 1-33; Examples 1-20).

For present claim 30, Felder et al. teach hybridization or binding in the wells or subregions (please refer to columns 3-4, 9-32; Examples 1, 2, 4, 5, 6, 12, 13, 14, , 15, 16, 17, 18, 19, 20).

For present claim 31, Felder et al. teach microtiter plates (please refer to columns 2-3, 5-6, 10, 13; Example 1).

For present claims 32-34 and 42-44, Felder et al. teach 96, 384, and 1536 well microtiter plates (please refer to columns 2, 5-6, 10, 13; Example 1).

For present claims 35 and 45, Felder et al. teach that the biological reagents or probes are RNA, oligos, DNA, PNA, enzymes, polymers, agonists or antagonists for cell membranes, toxins, venoms, viral epitopes, hormones, steroids, peptides, receptors, lectins, sugars, nucleic acids, oligosaccharides, proteins, antibodies (please refer to column 4).

For present claims 36-38 and 46-38, Felder et al. teach regions of about 1 to 700 mm^2; subdividing a 1536-well plate (e.g. each well less than 1 cm^2; approximately 1.7 mm diameter) into about 4 to 900 wells wherein each well has 9-36 reagents or 32,400 reagents and 96 well plates would accommodate more samples due to the larger size (e.g. each well less than 1 cm^2); and 345,000 test reagents (e.g. about 10,000,000; please refer to columns 2, 6-7).

For present claims 39 and 49, Felder et al. teach direct attachment of probes to surfaces (please refer to columns 4, 7-10).

For present claims 40 and 50, Felder et al. teach beads (please refer to column 5).

For present claims 54 and 58, Felder et al. teach photolithographic techniques (please refer to column 13, line 40).

However, Felder et al. does not teach fiber optic bundles.

For present claims 53 and 57, Walt et al. teach high density arrays utilizing fiber optic bundles (please refer to abstract; Figures 5A, 5B, 7A, 7B, 8A, 8B, 8C, 9A, 9B, 10A, 10B; columns 3-25).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the well of wells taught by Felder et al. with the fiber optic bundles taught by Walt et al.

One having ordinary skill in the art would have been motivated to do this because Walt et al. teaches that utilizing fiber optic bundles in biosensors or arrays allows for rapid analysis and detection of target analytes (please refer to background section particularly column 3).

One of ordinary skill in the art would have had a reasonable expectation of success in the modification of the well of wells taught by Felder et al. with the fiber optic bundles taught by Walt et al. because Walt et al. provide detailed descriptions and data utilizing fiber optic bundles in arrays (please refer to Figures 5A, 5B, 7A, 7B, 8A, 8B, 8C, 9A, 9B, 10A, 10B; Example 1).

Therefore, the modification of the well of wells taught by Felder et al. with the fiber optic bundles taught by Walt et al. render the instant claims *prima facie* obvious.

Maintained Rejections

18. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Please note: the rejections have been altered to reflect the claim amendments received on March 9, 2007.

Double Patenting

19. Claims 29, 31, 35, 37, 38, 40, 41, 45, 47, 48, 50, 52-53, and 56-57 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 7-9, 12-18, 24, 25, 26, 27, 28, 29, 30 of U.S. Patent No. 6,429,027. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the presently claimed invention and the claims of U.S. Patent 6,429,027 are drawn to an array comprising a microtiter plate with wells (e.g. first substrate) and microbeads (e.g. second substrate) with bioactives.

For present claims 29 and 41, U.S. Patent 6,429,027 claims a composite array (e.g. array of arrays) comprising a substrate with a plurality of assay locations with discrete sites which can be wells of a microtiter plate (e.g. first substrate) and a population of microspheres (e.g. a second substrate) with bioactive agents (please refer to claims 1, 3, 4, 7, 8, 9, 14).

For present claim 31, U.S. Patent 6,429,027 claims wells of a microtiter plate (please refer to claims 3, 8).

For present claims 35 and 45, U.S. Patent 6,429,027 claims the bioactive agents are nucleic acid, nucleic acid analogs, or protein (please refer to claims 12, 13, 25, 26, 27, 28, 29, 30).

For present claims 37-38 and 47-48, U.S. Patent 6,429,027 claims 1000 discrete sites per cm^2, 1,000,000 sites/cm^2, and 10,000 discrete sites (please refer to claims 15-24).

For present claims 40 and 50, U.S. Patent 6,429,027 claims microspheres (please refer to claims 1, 7).

For present claims 52-53 and 56-57, U.S. Patent 6,429,027 claims fiber optic bundles (please refer to claims 9).

Therefore, the presently claimed invention is obvious over the claims of U.S. Patent 6,429,027.

Arguments and Response

20. Applicants' arguments directed to the rejection on the ground of nonstatutory obviousness-type double patenting over claims 1-4, 7-9, 12-18, 24, 25, 26, 27, 28, 29, 30 of U.S. Patent No. 6,429,027 for present claims 29, 31, 35, 37, 38, 40, 41, 45, 47, 48, 50, 52-53, and 56-57 were considered but are not persuasive for the following reasons.

Applicants contend that U.S. Patent No. 6,429,027 does not claim a "substrate comprising a plurality of array locations, each array location comprising a plurality of discrete sites, wherein said sites comprise different bioactive agents, and wherein said array locations are configured as projections" to fit within a plurality of assay wells.

Applicants' arguments are not convincing since the claimed invention of U.S. Patent No. 6,429,027 render the instant claims *prima facie* obvious. U.S. Patent No. 6,429,027 claims a composite array composition comprising a first substrate which may be wells comprising a plurality of assay locations, a second substrate comprising a plurality of array locations which may be fiber optic bundles, and a population of microspheres that describe projections (please refer to claims 7-9).

21. Claims 29, 35, and 52-54 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 and 16-23 of copending Application No. 10/363,240. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the presently claimed invention and the claims of Application 10/363,240 are drawn to arrays comprising a (first) substrate with wells and a second substrate or cells with bioactives on the surface.

For present claim 29, Application 10/363,240 claims a (first) substrate with wells and a plurality of cells including fiber optic bundles (e.g. second substrate with bioactives; please refer to claims 1-3).

For present claim 35, Application 10/363,240 claims that the cells can bind an antibody ligand or the cells comprise a binding partner, peptide, or candidate agents (please refer to claims 4-7).

For present claims 52-53, Application 10/363,240 claims fiber optic bundles (please refer to claim 2).

For present claim 54, Application 10/363,240 photolabile linkage (e.g. photolithographic; please refer to claims 20 and 23).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Arguments and Response

22. Applicants' arguments directed to the rejection on the ground of nonstatutory obviousness-type double patenting over claims 1-7 and 16-23 of U.S. provisional Application No. 10/363,240 for present claims 29, 35, and 52-54 were considered but are not persuasive for the following reasons.

Applicants contend that they will consider amending and/or canceling claims in one or both applications or filing a terminal disclaimer. Therefore the rejection is maintained.

23. Claims 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 47, 48, and 50 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 37, 38, 39, 40, 42, 43, 44, 45, 49, 50, 51, 52, and 55 of copending Application No. 09/606,369. Although the conflicting claims are not identical, they are not patentably distinct from each other because both the presently claimed invention and the

invention as claimed in Application 09/606,369 are drawn to arrays comprising a microtiter plate with wells (e.g. first substrate) and a second array component (e.g. second substrate) with bioactive agents.

For present claims 29 and 41, Application 09/606,369 claim a first array component (e.g. first substrate) that can be a microtiter plate with wells and a second array component (e.g. second substrate) with a bioactive agent including microspheres (please refer to claims 37, 38, 39, 40, 44, 45, 49).

For present claim 30, Application 09/606,369 claim a hybridization chamber (please refer to claims 37, 38, 39, 40, 49, 52).

For present claim 31, Application 09/606,369 claim microtiter plates with wells (please refer to claims 40, 44, 45).

For present claims 32-34 and 42-44, Application 09/606,369 claim 96-well, 384-well, and 1536-well microtiter plates (please refer to claim 45).

For present claims 35 and 45, Application 09/606,369 claim the bioactive are peptides, nucleic acids, or target analytes with fluorescent labels (please refer to claims 51, 55).

For present claims 36-38 and 46-48, Application 09/606,369 claim bioactive agents at a density of about 10,000,000 to 2,000,000,000 per cm2 or about 100,000 to 10,000,000 per cm2 (please refer to claims 42, 43).

For present claims 40 and 50, Application 09/606,369 claim microspheres (please refer to claims 49).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Arguments and Response

24. Applicants' arguments directed to the rejection on the ground of nonstatutory obviousness-type double patenting over claims 37, 38, 39, 40, 42, 43, 44, 45, 49, 50, 51, 52, and 55 of U.S. provisional Application No. 09/606,369 for present claims 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 47, 48, and 50 were considered but are not persuasive for the following reasons.

Applicants contend that they will consider amending and/or canceling claims in one or both applications or filing a terminal disclaimer. Therefore, the rejection is maintained

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 6,210,910 and 7,115,884.

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Future Communications

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amber D. Steele whose telephone number is 571-272-5538. The examiner can normally be reached on Monday through Friday 9:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Schultz can be reached on 571-272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ADS
May 15, 2007

MARK L. SHIBUYA
PRIMARY EXAMINER